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UFO'S SEEN OVER PHILADELPHIA, DETECTED ON TWO SEPARATE RADARSCOPES

Cover-Up of Reports

One of the three or four best sightings of recent months occurred early on the morning of July 31, 1963, over Philadelphia. Sightings were made by dozens of Philadelphia residents, in addition to observers in the Tower of the Philadelphia International Airport, and radar contacts were made by both the International and McGuire Air Force Base, New Jersey. Yet, owing to the suppression of pertinent facts, this most important incident has received little publicity, and what little there was tended to promote the impression that the sighting was caused by Arcturus or some other heavenly body. It is only due to first-hand interviews by NJAAP investigators with key persons in the sighting who must remain anonymous that the facts presented here were discovered.

The first reports were made around midnight (apparently) on July 30-31, when numerous Philadelphians observed a strange reddish UFO hanging at 45° in the western sky. Unfortunately, the exact times of observations and details of reports are not clear, owing to the confusion of the various sources. Our investigation was begun too late to clear up these obscurities, and it does not seem that at this late date they can be cleared up. However, we present the information available to us, which shows the outlines of the sighting fairly clearly.

The Philadelphia Inquirer (7/31/63), reported that "a flashing red and white object with a red tail hung over West Philadelphia mystifying midnight sky watchers early Wednesday. The object flashed brilliantly and was seen from the western suburbs and various parts of the city. To center city viewers it seemed about 45 degrees above the horizon. The tower at International Airport and the Weather Bureau were unable to identify it." The Inquirer went on the newsstands on the morning of July 31; that evening the Philadelphia Bulletin appeared with a negative and contradictory story, under a normally facetious headline ("Twinko, Twinko, How They Wonder!"). The UFO was vaguely described as "flashing objects in the sky," and "towerman and weatherman" were quoted as identifying it as a star. "There's hardly any question about it," ran the quotation. "What the callers saw was a star."

This answer seemed perfectly satisfactory, and, as nobody bothered to ask exactly which star was the culprit, this point remained unclear until August 10, when it was lifted out of obscurity by Dr. I.M. Levitt, Director of the Planetarium and part-time UFO debunker. Arcturus was the answer, said he (Inquirer, 8/11/63), adding that this brilliant star "dips below the northwest horizon by midnight to 1 A.M. during August." It does not seem to have occurred to the Inquirer writers to wonder how a star which set between midnight and

(see "Philadelphia Sighting," p. 3)

EDITORIAL

On the whole, we feel that editorials in UFO magazines are rather tedious affectations that UFOlogy can well do without, and so we shall try to avoid them as much as possible in the future -- but it somehow does not seem fitting to put out the first issue of a bulletin under one's own auspices without saying a few words on the occasion. So perhaps this might be an opportune time to make a few general observations and statements of principle.

It is unfortunate that a large number of UFO researchers these days have to an alarming extent lost sight of the true goals toward which they are striving. UFOlogy is in itself a highly controversial field, and to add superfluous and often nonsensical controversy to it serves only to obscure a subject which is, heaven knows, mystifying enough without any such outside help. Yet this is what many UFO students are doing -- and, in many cases, devoting the bulk of their time and effort to doing. Many UFO publications with terrific potential have degenerated into -- or always were -- mere gossip sheets, with UFO sightings and concrete evidence compressed and tucked into the "Short Shots" column to accommodate juicy bits of scandal. We blush to say that the chief offenders are often teen-agers -- the people upon whom the future of UFO research rests.

Why is this so? Well, for one thing, most people are naturally attracted to gossip. As controversies involving personalities provide some of the most luscious gossip that one can find, it is natural that readers should be attracted to such controversies and that editors of UFO journals, either because of personal inclination or desire to please their readership, should include a great deal of material of this nature. We repeat, this is a perfectly natural desire, and hardly something to be ashamed of, but it must be strongly suppressed when dealing with UFO's. After all, the tabloids may make thrilling reading, but it is on the pages of the New York Times that history is made.

In this bulletin, we refuse to take part in the petty and childish feuds indulged in by so many UFO splinter groups -- their senseless attacks upon NICAP and each other. We shall devote no space to metaphysics, religion, or politics; those who have followed the decline and fall of Norbert Gariety's S.P.A.C.E. know well how fatal those can be to a UFOzine.

On the positive side, we will attempt to present to you the best first-hand reports available to us, as thoroughly investigated as possible. And, more important, we shall give you interpretations of the UFO events in factual articles -- the one on the British orators which appears in this issue, for example. For it is only in this manner that we can achieve the true objective of our research: to solve the UFO mystery.

"Enough of words. Doods now," said Aeschylus' Prometheus. Indeed, it is high time we stopped this editorial jabbering and proceeded to our more important material. We leave you with one final bit of instruction:

Read -- and THINK.

Philadelphia Sighting (cont'd)

1:00 A.M. could appear to be at 45° in the west during the early morning hours.

This obscurity was merely compounded by a letter from Dr. Lovitt (9/3/63), informing us that "when the Inquirer called me, it was around ten o'clock and at that time Arcturus was 45° above the horizon." This statement ran directly counter to all the information that we had previously gathered on the sighting. Mr. Glenn Stallard of the Weather Bureau at the International Airport had told us over the phone that all reports of the object to his office had occurred after midnight, although he had not been there to receive them. After our letter from Dr. Lovitt, we requested written confirmation of this, and received the following: "I was on duty at the Weather Bureau office from 4:00 p.m. to midnight on July 30, 1963. To the best of my knowledge no reports of unidentified flying objects were received that evening" (9/27/63). The implications of this are clear enough.

Unfortunately, letters to the office of the Inquirer have brought only vague and ambiguous answers, of no help whatever in clearing up this point. This much, however, seems certain: If indeed the UFO was observed at 10:00 on July 30, it stayed around for a good long time. We are informed by a reliable source that UFO reports were coming in very frequently to the Airport after midnight. Obviously, whatever it was that Philadelphians were seeing, it was not the star Arcturus.

The sighting reached its climax at about 2:00 A.M.,¹ when men in the radar shack at the International Airport noticed three unexplained blips in the northwest quadrant of their radarscopes. Those blips subsequently moved off into the northeast quadrant; shortly afterward, observers in the Tower saw three mysterious white lights in the northeastern sky.

An investigation of the strange objects was made by the pilots of a small private plane. As they went up after the UFO's, they were vectored in by the radarman at the International Airport. Their first visual contact was made when they were at about 2000 or 3000 feet. The radar shack radioed: "Object 12:00 your position." Sure enough, directly ahead of them, low on the horizon, at an angle of about 30° to the airplane's nose, was a white light in the northeast.

For the next hour or so, the radarmen continued to guide them, putting them through an involved series of twists, turns, and loops. However, despite this, they only managed to get a glimpse of one other UFO: a small light in the north-north-east, partly hidden in what looked like a hazebank.

Finally, the radar shack advised them to switch their frequency over to McGuire Air Force Base, New Jersey, over thirty miles from the Airport (in an east-north-east direction). They did so, and McGuire, which apparently had the identical objects on its scopes, continued to vector them in on the lights.

In brief, the pilots were unable to get any closer to the UFO's, nor were they able to discover anything about them. The chase ended at around 3:30,

¹Unfortunately, our sources for the following information consist almost entirely of first-hand interviews with persons whose names cannot be divulged here. However, confirmation of these statements may be found in the WOR 8:00 News broadcast of the morning of July 31. This account, which is, to the best of our knowledge, the only news coverage of this facet of the sighting, is substantially accurate. The source of WOR's information is not known; it may prove to be of considerable importance, and Special Advisor Ivan Sanderson is investigating the matter. If he discovers anything, it will be reported in the next issue of this Bulletin.

when the pilots observed a National Airlines plane approaching from Washington, D.C., en route to New York, preparing to land at the International Airport. The airline pilot overheard their conversations, and asked them what it was all about. They told him. He replied that he was unable to look around at the time, but, after taking off again for New York, would have a chance to do so. He then broke off communication, and the private pilots, who were getting disgusted with their fruitless search, decided to give up the hunt and land.

It is not known at present whether the National Airlines pilot was ever able to look for the objects, and, if so, what he saw. Attempts on our part to locate him have thus far been unsuccessful, and it is rather doubtful if any more information on this will be forthcoming.

If the radar sighting had been given straightforward treatment by the official persons both at the International Airport and McGuire Air Force Base, it is probable that it would be a considerably weightier piece of evidence than it is now; in any case, there would be no necessity for this objectionably melodramatic suppression of the names of our sources. Unfortunately, this was not the case. Some form of censorship was imposed, and the sightings were denied by both McGuire and the International Airport. (We may note here that we have no doubt as to the reliability of our sources as opposed to the denials). Captain John W. Goodson, of McGuire AFB, informed us in a letter dated 8/27/63: "The statement attributed to the WOR News Bureau in your letter is not true. No lights were picked up by McGuire radar units...." About a week later, similar denials were made over the phone to us by one of the persons who was in the radar shack at the time of the sighting. He remembered that there was some commotion over a light which later turned out to be Arcturus; the radar was not involved, in any case.

Although we originally postulated some form of official cover-up, presumably sponsored by the Air Force, further reflection has made it seem more probable that the suppression of facts was carried out at quite a low level. At any rate, it seems unlikely that the higher officials at McGuire and the Airport even heard about the incident. Early in August, we spoke over the phone with Leo G. Marshall, Facility Chief of the Tower at the Airport. We are acquainted with Mr. Marshall, and believe him to be thoroughly honest and sincere. He was very pleasant and helpful over the phone, and evinced an interest in UFO's. To the best of his knowledge, he said, no reports had come in that night, but added that he would probably not be informed of phone calls reporting unusual lights. He did say that an engineer named James Orlando had phoned to report a sighting, but he couldn't remember just when.² We believe that his

²The Orlando sighting, we later discovered, occurred on July 22, and was unrelated to the later incident. We summarize it here: At about 10:45 P.M., Mr. Orlando was standing outside a parked car near the Westinghouse plant in Philadelphia when he observed a red ball with a green tail crossing the sky on a slant trajectory from southwest to northeast. We identified this as an unusually brilliant fireball meteor, and, although Dr. Charles P. Olivier (President of American Meteor Society, emeritus Professor of Astronomy at the University of Pennsylvania, Special Advisor to NICAP) had no reports on file which would confirm such an explanation, we have no valid reason to doubt. Mr. Orlando, however, is to be deeply thanked for his kindness in cooperating with us and commended for the lucid nature of his report. Our special thanks to Michael R. Freedman, of Philadelphia, who interviewed the witness.

denial was sincere, and that he honestly had not been informed of the sighting. The same probably goes for the officials at McGuire.

In our opinion, the "censorship" was probably the result of a mutual agreement on the part of the radarmen (both at McGuire and at the Airport) and the towermen. All were doubtless aware of the scorn of the Air Force for UFO's, and they (or at least those at McGuire) feared that they would be looked upon with considerable disfavor by their superiors if they reported flying saucers on their radarscopes. The best thing, they decided, was to keep mum.³

This, and not an Air Force cover-up, seems to be the best explanation of the denials we received.

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It should be noted here that a number of sightings occurred over Philadelphia on the night of August 4. We have been able to discover no information about them other than the scanty data given in the Philadelphia Daily News of 8/5/63, and their value as evidence is practically nil. "One Daily News caller said her husband and some neighbors saw something moving slowly through the sky. It appeared to be red, white and blue and looked like the top of a maypole, she said. Another caller reported a cross in the sky 'right in back of the moon.' Experts seemed to think the sightings were caused by starlight reflecting on upper atmospheric bands of dust or smog." Despite the ambiguity of the last sentence (who were the "experts," and exactly what does "seemed to think" mean?), the atmospheric explanation seems probable. We mention these sightings here more as a matter of record than anything else. (See also the Philadelphia Inquirer, 8/5/63).

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The possibility of a natural explanation for the events of July 31 should not be dismissed automatically, but should be given careful examination.

First, we must mention one point which will bring joy to the skeptic's heart. There existed strong temperature inversions on the night of July 30-31 (as, indeed, for the next week or so). Early that evening, a cold front had passed over Philadelphia, swooping away the dust, smog, haze, and whatnot which was present in the city's atmosphere. This unusual clarity of the sky was augmented by a number of layers of hot and cold air, rendering Dr. Levitt's Arcturus theory far from fantastic.

However, upon closer examination, it falls apart. The most obvious of its flaws is that the sightings reached their peak after Arcturus had sunk below the horizon. The brilliant star Vega was visible in the west in the early morning hours, but it was at too great an altitude above the horizon to have caused the sightings.

There is another salient point, which must be mentioned. We have an official U.S. Weather Bureau weather map for 1:00 A.M. on July 31, 1963; it shows that meteorological conditions were strikingly uniform for a great distance along the Middle Atlantic Coast.⁴ From this, we may infer that the prevalent at-

³In a letter to us dated 11/13/63, Major Maston M. Jacks of the USAF Public Information Division denied any knowledge of the sighting.

⁴Over Philadelphia, the temperature was 72, the dewpoint was 55, and the barometer was 176 (having risen and leveled off, +14, in the past three hours). For New York, these figures were, respectively: 74, 54, 176, +10. Washington: 76, 55, 176, +10. Boston: 67, 54, 157, --. All of these locations were clear, except for Washington, which was about 3/4 clouded, with a visibility of 10 miles.

mospheric conditions were very much similar over an area quite a bit larger than the Delaware Valley. Yet, although dozens of Philadelphians were startled by an object which Dr. Levitt and others would have us believe was an atmospheric distortion of a star, this "distortion" was apparently seen nowhere else. It is strongly indicated that the "unknown," whatever it was, was quite close to Philadelphia.

There is a temptation to dispose of the radar sighting by invoking the temperature inversions; however, this seems extremely improbable. Not only were the same objects picked up on radar units more than thirty miles apart (quite a neat trick for temperature inversions) but were seen visually from the Tower. The odds against any such explanation are very high, and the skeptics will have to do better.

It should be mentioned, though, in the interests of objectivity, that the observations made by the pilots have an element of doubt attached to them. Checking a star chart, we discovered that the bright star Aldebaran was just above the northeast horizon at the time of the sighting; similarly, the star Capella was in the north-north-east. These identifications, however, are in themselves rather doubtful. The light seen on the northeast horizon was described as steady; although there was some suggestion that it might have been a planet (which was quashed when we checked our almanac and star chart), it certainly did not exhibit the characteristics of a star. Strong temperature inversion layers may give a star an unusual appearance in that it seems to be "in motion, hovering, pulsating, and flashing red and green lights,"⁵ but from this very description it seems unlikely that they would impart to it the characteristics of a steady light. In addition, the coincidence of the position of the light with that of the radar blip would seem to testify against such an explanation. However, it is a possibility which should be kept in mind.

It must be emphasized that these considerations do not detract from the value of the sighting in general. It certainly remains one of the best and most important UFO incidents of 1963.

ORTHOGENIC CORRECTIONS

Since our article on 1952 orthoteny in The Shadow of the Unknown was published, we have discovered further information regarding the statements made therein.

As pointed out to us by Cecil D. Clayton, of Henderson, Kentucky, our tentative identification of Lynnville, Indiana, with Lynn, Indiana (in regard to the sightings of July 25) was quite incorrect. Actually, Lynnville is a small town about twenty miles northeast of Evansville, and nowhere near our proposed alignment. It is with a pang of regret that we drop this lovely alignment into the wastebasket, but, que será, será.

The abovementioned pang is somewhat alleviated by our discovery of the true location of Carmel, Ohio, in connection with the July 19 sightings. Although our proposed River Edge-Carmel-Charlton Flats alignment failed to materialize, we discovered an equally valid one stretching from Charlton Flats through Carmel to Washington.

As stated in our article, our study of orthoteny during the "Big Flap" is far from finished. The article merely reported the results of a pilot study. We need more sightings from June, and, preferably, July, 1952. Won't you help?

⁵Menzel, Donald H., The World of Flying Saucers (Doubleday, 1963), p. 64.

PUBLICATION OF NICAP REPORT 'ASSURED'

NICAP -- the National Investigations Committee on Aerial Phenomena -- is finally about to publish its long-awaited report The UFO Evidence, the result of a heroic six-year struggle to present the UFO facts to the public. Although this Report has been in preparation for the past year and a half, owing to financial and other problems printing was delayed until now. But, in the July-September 1963 issue of its organ, The U.F.O. Investigator, NICAP announced the forthcoming publication of the Report, stated that it was available to members only for \$3.95, and strongly expressed the necessity of orders for The UFO Evidence by a majority of members. Response was good, and early this month NICAP informed us that "printing of the Report is assured, also continuation of NICAP."

There is little doubt that, when the Report comes out, it will create the biggest splash that UFOlogy has seen in the past decade. It will be distributed to all Members of Congress and over 2,000 newspapers and broadcasting stations. It will be the complete, fully documented history of UFO's, and of the Air Force censorship of UFO data. It may well bring an end to official secrecy for once and for all, and inaugurate an entirely new era for UFOlogy.

Unfortunately, this most important document is at present unavailable to non-members, and NICAP has temporarily ceased accepting new members. However, when membership is re-opened -- and we are sure that it soon will be -- we urge all who read this to join NICAP. Dues are \$5.00 for six bi-monthly issues -- extremely cheap for what is probably the best and most attractive UFO journal published in this country. Write: 1536 Connecticut Avenue, NW, Washington 6, D.C., 20036.

'BONFIRE'-LIKE OBJECT SIGHTED OVER PHILADELPHIA

At approximately 7:00 P.M. on October 6, 1963, a UFO described as being like a "bonfire" was observed over Philadelphia by Michael R. Freedman, an 18-year-old student. Mr. Freedman is deeply interested in UFO's, and gave the Director invaluable assistance in investigating the radar-visual sighting of July 31 (see above).

Mr. Freedman's report follows:

"I was standing atop a four-story building checking the sunset for possible photography. Being interested in UFO's, I decided to watch aircraft, birds, stars, etc. in order to be better able to distinguish these objects from authentic UFO's.

"Looking towards the southeast, I saw a fairly large yellow-orange object. It could be described as a 'bonfire' with four to six whitish areas along the center. It was more oblong than round."

(In a later interview with the witness, it was determined that the object had been oval, about twice as long as it was wide. Its length was approximately equal to the diameter of a nickel held at arm's length. The whitish areas were arranged in a straight row along its length. Although glowing like a bonfire, its apparent outline was fairly rigid, and it did not shoot off tongues the way a fire would.)

"Below this object was some type of aircraft, its navigation light flashing bright red." (The witness later stated that it was traveling in a southwesterly direction.) (cont'd)

"From closer observation I was able to determine the position of the UFO as southeast Philadelphia over or near the Delaware River. It was about 50 degrees above the southern horizon.

"The object was traveling eastward (ENE) at first, then changed to a northwesterly course (NNW). One moment it was going east, and the next thing I knew it proceeded west.

"It was visible for about 20 seconds before completely vanishing. Not upwards, not forwards, just disappearing....

"Additional information: Its velocity was more or less uniform although it seemed slightly faster than the aircraft 'below' it. It did not 'fall' but appeared to glide through the air. Other than the sharp change of direction, it did not execute any unusual aerial maneuvers.

"Also: the sun had dropped below the horizon before the sighting and its rays still imparted an orange-red glow to the clouds in the immediate west. I had gone up to the roof about 6:15 P.M. and left at about 7:30 P.M."

Mr. Freedman's own evaluation of the sighting is:

"I doubt very much if it was any of the following: optical illusion; hallucination; aircraft; balloon; reflection of sunlight; birds; meteor.

"However, were I to choose one of the above for an 'explanation,' optical illusion or meteor would be my guess.

"I am not accustomed to shouting 'UFO!' at everything that does not fit my conception of 'natural phenomena.' I will say this -- the object was unlike anything I have ever seen in the relatively short period of my sky-watching, or from anything 'natural' I have ever heard of."

After his sighting, Mr. Freedman checked with the Astronomy Department at the Franklin Institute and the Weather Bureau at the Philadelphia International Airport. Both stated that no meteors had been reported that night. Of course, both the long duration of the sighting and the sharp turn made by the object rule out any explanation in terms of meteors.

Another possible explanation is an aircraft reflecting sunlight, but this too must be discarded. The sun was about half an hour below the horizon, and would hardly have imparted such a brilliant glow to an object in the southeast. The abrupt turn made by the object in itself rules out such an explanation.

Of the other explanations tentatively suggested by the witness, none can be seriously considered. In addition, there are no atmospheric phenomena which would fit his description.

We are presently attempting to locate the pilot of the plane Mr. Freedman mentioned in his account. If we succeed, we shall probably have an interesting confirmatory description. Results will be reported in the next issue of this bulletin.

NJAAP joins the nation in mourning the tragic and untimely death of President John F. Kennedy.

Special Article:

AN EXAMINATION OF THE RECENT CRATER 'EPIDEMIC' IN GREAT BRITAIN

In late June and early July, 1963, at least five groups of craters of mysterious origin and nature were discovered in England and Scotland. The most publicized of these, the mysterious hole found on a farm at Charlton, Wiltshire, was discussed in detail in an article by the Director for the book The Shadow of the Unknown. Since this article was written, we have received much additional data on the Charlton and other craters which multiplies the significance of the Charlton mystery tenfold. When this information is collated, as it will be below, the outlines of a weird pattern begin to dimly emerge. This pattern may well turn out to be one of the most significant UFO events of the 1960's.⁶

The first of the craters to come to public attention was the one discovered on Manor Farm (Charlton) on July 10 by Roy Blanchard, the owner of the farm. Although we incorrectly reported that nothing had been seen in the area prior to the discovery of the hole, as a matter of fact an orange object was seen to flash through the sky on that date by Constable Anthony Penny (London Daily Express, 7/23/63). Whether this has any connection with the hole is, of course, uncertain, but it appears probable that it does. In addition, Leonard Joliffe, the dairyman on Manor Farm, heard a blast at about 6:00 on an unspecified morning before the crater was found (London Times, 7/19/63), although the relevance of this is a little dubious.

The site of the hole was inspected by Charles Stickland, B.Sc., (author of the BUFOA Journal article) on July 18 and again on July 24 and 25. His description is good, but differs on a number of points from the facts reported to us by Blanchard in his letter of August 18. On these points, we have deemed it best to accept Blanchard's report rather than Stickland's, especially as Stickland does not appear to have spoken to Blanchard at all.

A diagram of this crater, based on a diagram drawn by Blanchard, is shown in Figure 1. Although it is quite clear, a few additional remarks should be added. The small hole shown in the center of the crater was about two inches in diameter and about three feet deep. According to Stickland, "it was not completely empty but had loose rocks inside it." Although only about three feet in diameter, the crater was situated in the center of a shallow circular depression with an overall diameter of about eight feet. Within this area, all but a few potato plants had disappeared, apparently having been sucked up. From the hole radiated four ill-defined trench-like depressions, three of them continuing on into the adjoining barley field. Whatever caused these trenches had sucked up the barley that lay in their paths.

Stickland later discovered three other locations on the farm where crops were disturbed mysteriously. The first of these was under a gap in the hedge on the far side of the barley field, where the barley was missing over a cir-

⁶Our chief sources for the information presented in the first section of this article are: a most fascinating and detailed letter from Mr. F.K. Haythornthwaite, of Cambridge, England, dated 9/24/63, for which we are very deeply grateful; and the Summer 1963 issue of the BUFOA Journal, an uncommonly good little magazine published by an amalgamation of British UFO groups called the British UFO Association (write: F. Malcolm Bull, 14 Battinson Street, Southowram, Halifax, Yorkshire). Also: Flying Saucer Review, September-October 1963; Saucer News, December 1963; and The Shadow of the Unknown.

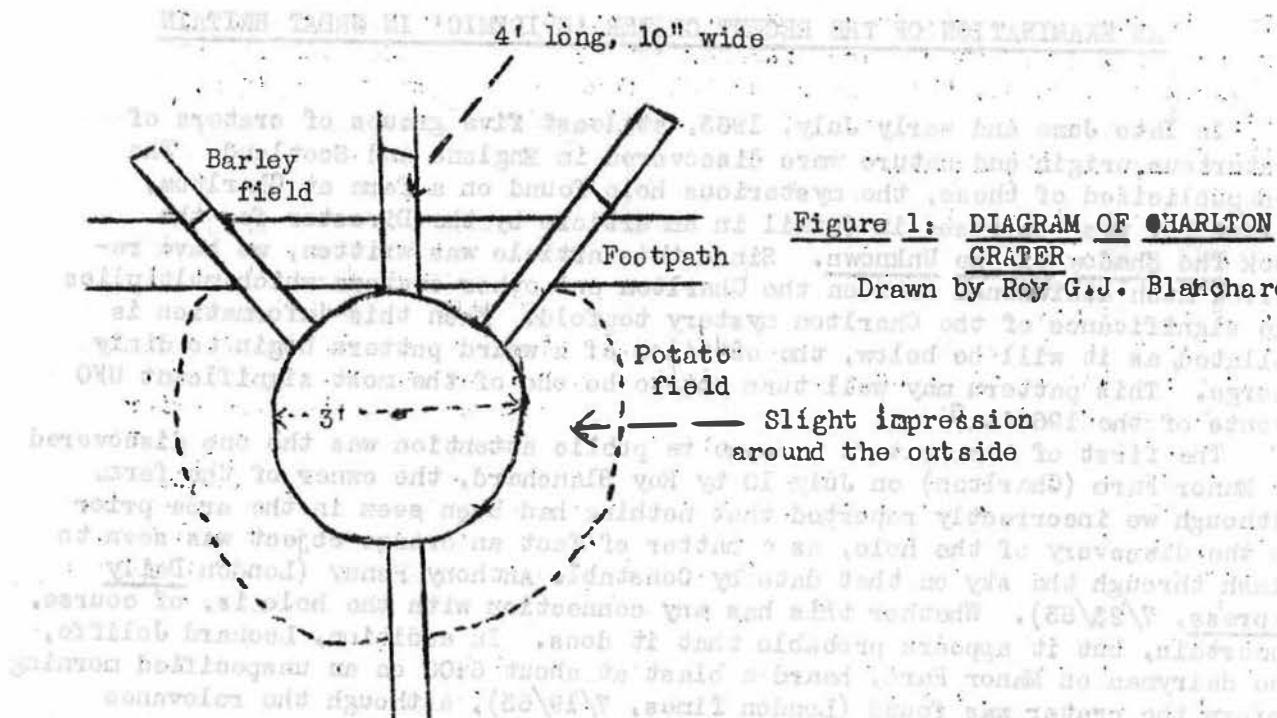


Figure 1: DIAGRAM OF CHARLTON CRATER.

Drawn by Roy G.J. Blanchard

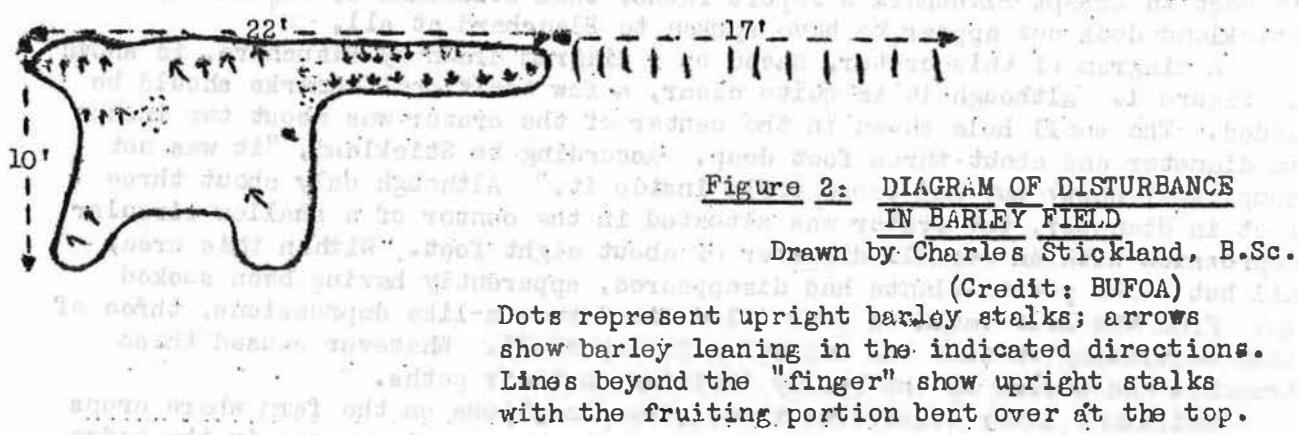


Figure 2: DIAGRAM OF DISTURBANCE IN BARLEY FIELD

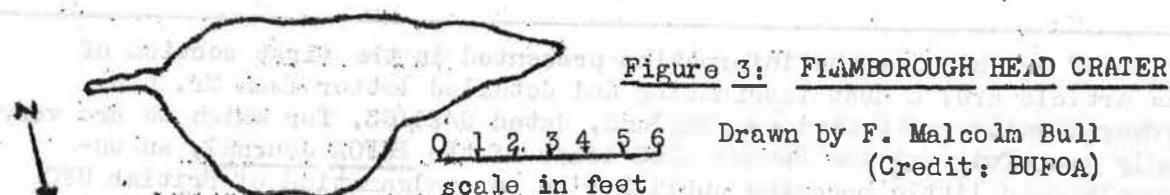
Drawn by Charles Stickland, B.Sc.

(Credit: BUFOA)

Dots represent upright barley stalks; arrows

show barley leaning in the indicated directions.

Lines beyond the "finger" show upright stalks with the fruiting portion bent over at the top.



cular area about two feet in diameter. Beyond this barley was a grass field, and then another barley field. In this second barley field there was a "considerably disturbed" area, in shape resembling a hand with a pointing finger. Beyond the "finger" was a "line of upright barley stalks with the fruiting portion bent over at the top," seventeen feet long. A copy of Stickland's diagram is shown in Figure 2.

The third area of disturbance was also in this field, but, says Stickland, "I did not examine this, since I did not see quite how I could reach it or measure it without trampling part of the crop that was still standing."⁷

Meanwhile, a bomb-disposal unit was investigating the original hole. Their metal detector gave a reading, and, after digging down six feet, they unearthed a half-pound piece of metal which was widely touted as a meteorite. Apart from the fact that it would have been quite impossible for a half-pound meteorite to have penetrated to a depth of six feet,⁷ an examination of the object at the British Museum in London disclosed that it was actually "iron-pan", consisting mainly of iron hydroxide, which was indigenous to the soil. Stickland points out that, when the "iron-pan" was removed, the metal detector no longer gave a reading, rendering it unlikely that there was any genuine meteorite remaining in the area. (In addition, unless it were of very considerable size, a meteorite could never have penetrated to that depth).

It would be quite pointless to chronicle here the many irresponsible statements made by both publicity hounds and scientists who should have known better. But, through the haze of nonsense, a startling fact began to emerge: other craters had been discovered in recent days.

The most widely publicized of these were two twin holes discovered ten days or so after the Charlton crater, on the Middle Monynut Farm, East Lothian, Scotland -- in the Lamormuir Hills, near the Berwickshire border, about 21 miles south of Dunbar. According to the reports (The Scotsman, 7/25/63; the BBC program Radio Newsreel), they were twelve feet apart, sixteen feet in diameter, and about three feet deep. Twelve channels, "like the spokes of a wheel," radiated from each crater to a length of up to 44 feet. Heather and large clods of earth were scattered as far as 40 yards from the holes. The oddest feature of the craters, however, was the fact that a number of small square holes, one foot wide and two feet deep, were found about 35 feet from them. Unfortunately, the arrangement of these most remarkable square pits is not clear.

Another pair of craters was discovered late in July (the exact date is uncertain) on the slopes of Dufton Fell, Westmorland. The discovery was reported in the Yorkshire Post, 8/2/63, but the Post's description greatly conflicts with that given by Haythornthwaite, who examined the craters himself. Needless to say, we are using Haythornthwaite's description. "The large hole," he writes, "was 37 yards across, two foot deep all over, and circular, though irregular, in shape. The craters were on a slight slope, and from the lower end of each extended a 'channal' up to four feet deep and eighteen yards wide. The channal from the larger crater was about a quartier of a mile long, the other being about 200 yards long. Both eventually joined small streams." He adds: "Although puzzling, those frankly did not look like effects of a UFO landing, but seemed to have been caused by very large quantities of water landing from above all at once." Obviously, nothing of the kind could have happened, and it seems probable that these craters belong in the same category as those of Charlton and East Lothian.

The oldest of Britain's mystery craters appears to have been the one

⁷ See the articles on the subject Meteorite in the Encyclopedia Britannica and the Encyclopedia Americana.

discovered at Flamborough Head, Yorkshire, which was known to have been in existence before the end of June. It was reported in the Hull Daily Mail, 7/20/63, but a more accurate report was given in the BUFOA Journal by F. Malcolm Bull, who made a personal investigation. According to Bull, it was first noticed toward the end of June by an unnamed plough boy who "was cutting the grass on the edge of a field (which is on the headland) at North Moor Farm, when he noticed that the grass and hay near the edge had been disturbed. He thought nothing more about it until on the 19th July he was cutting the hay in the field when he saw that the earth had been thrown up; his first thought was that a pig had been rooting and thrown up the soil, but when he examined it closer he saw that it could not have been made by a pig."

For reasons that are not clear, the bomb disposal unit which investigated the hole filled it in after they were finished, and so neither its outlines nor its size could be determined easily when Bull investigated it on July 31. From the diagram provided by Bull (Figure 3), one would gather that it was roughly circular and about six feet in diameter. It was known to be 12 to 18 inches deep. From its edges, several cracks ran in all directions; the bomb disposal unit dug to follow one or two of these. The projection on the left of Bull's diagram is the only crack which retained its original appearance at the time of Bull's investigation; it was three inches deep, and, apparently, about two foot long. The projection on the right is the result of the bomb disposal unit's digging along another of the cracks.

The fifth and last⁸ of the present flurry of crater groups of which we are cognizant was discovered near Sanquhar, Dumfrieshire, Scotland. It was briefly reported in the BBC Scottish News, 7/27/63, at 6:15 P.M. The only details given by the BBC were that there were three craters and that they were similar to the holes at East Lothian.

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Writing in The Shadow of the Unknown, we called attention to three cases, which produced physical effects which in some manner or another paralleled the mystery at Charlton. It was our thesis that the parallel effects could be safely deduced to have had parallel causes, and that it was possible to reconstruct with a fair amount of accuracy the event which produced the Charlton hole. We then presented our reconstruction. The observations made by Stickland have both confirmed and amplified our deductions, which we present here.

The three cases which we cited all occurred during the great European "flap" of September and October, 1954, and are recounted by the French researcher Aime Michel in his monumental Flying Saucers and the Straight-Line Mystery (Criterion, 1958).

The first of Michel's cases occurred on September 26 at Chabeuil, France, and involved the "little man" who so terrified Mme. Lebouef. As the UFO in question took off from among a group of trees, it passed very low over a wheat-field. When the field was later examined, it was discovered that "the first few yards of wheat, in the path of the object as it took off through the field, were flattened out in radiating lines" (Michel, p. 82).

The second took place on October 4, at the small French village of Poncey-sur-l'Ignon. A luminous, orange, egg-shaped object hovered low over a field

⁸We are deliberately omitting the hole discovered in a park in the center of Southampton on July 15, and reported in the Southern Evening Echo 7/16-17/63. Although not much information is available on it, it does not seem to belong in the same genre as the other craters, and may well have some prosaic explanation. We could, of course, be wrong.

and then abruptly took off, tearing out a hole about a yard and a half long and an average of two feet wide. Oddly enough, "about half-way down the hole was wider than at ground level." Still more strange was the fact that the roots and rootlets in the soil were completely undamaged, "as if the mass of earth spread over the surrounding grass had been sucked out by a gigantic vacuum" (Michel, p. 134).

The third occurred at Po di Gnocca, Italy, on October 15. A large disk was observed by several peasants to land and then suddenly take off again, sucking up the earth below it. A crater almost twenty feet in diameter was left on the spot, and six nearby poplar trees were carbonized (Michel, p. 181).

These incidents, particularly the second and third, are strongly suggestive of the Charlton mystery. Applying the data gathered by Michel to the Charlton hole, we deduced the following event (quoted from The Shadow of the Unknown, p. 78)

"...Apparently, a relatively small (i.e., about five or six feet in diameter) disk-shaped UFO either landed in or hovered low above Mr. Blanchard's potato patch. As it took off, it suddenly brought into play a terrifically strong field of force which sucked up the potatoes and the earth in which they were planted. Evidently this field was more powerful at a section in the center of the disk than the rest of it, and a small crater was torn out beneath this section. Four strong rays of force, emanating from the rim of the disk, evidently as sharply defined as beams of light, formed the trenches, and sucked out the barley that was in their paths."

As noted above, these deductions were both confirmed and amplified by Stickland's discovery of other places on Manor Farm where the crops were disturbed. The disappearance of the barley under the gap in the hedge would seem to be caused by a mechanism similar to that which created the crater itself. More important is the disturbance in the other barley field; the resemblance between this (particularly the "finger" and the bent barley stalks beyond it) and the marks in the wheat at Chabouil is too obvious to require comment. The geographical location of these points is of great importance, says Stickland. "The gap in the hedge is an ideal spot from which to look down the valley. The 39-foot disturbance in diagram 2 points directly down the valley towards a gap between two hills. This would be the obvious flight path should a machine be required to keep close to the ground." The UFO, after perhaps hovering erratically in the area for a few moments, clearly moved off directly above the path of the "finger" (note, however, that the barley is flattened at right angles to the flight path). The strength of its force field diminished abruptly, bending only the fruiting portion. We can imagine it rising slightly, then moving off down the valley....

Truly, the mystery at Charlton has afforded us what amounts to clear "footprints" of a UFO.

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It cannot be denied that there are certain dissimilarities between the five sets of craters discovered in England and Scotland. Nevertheless, the similarities are far more important, and so striking that it seems improbable that they are not all the results of similar causes. (In our discussion of them, it would probably be wise to exclude the Sanquhar craters, since so little is known about them). In all cases, the craters gave the general impression of having been torn out by some force, with earth scattered around the perimeter in greater or lesser quantity. In all cases, the craters were roughly circular. In all cases, some form of channels were created, radiating outward from the craters, although their number and appearance differed (the peculiar circumstance of the channels from the Dufton Fell craters connecting with streams is of

particular interest).

The chief point of dissimilarity among the craters is, of course, their sizes (diameters would be more accurate, as their depths display an odd uniformity). This hardly testifies against the similarity of their origins. We may look back to the orators at Poncey and Po di Gnooca for a comparison. Although the Poncey hole was much smaller than the one at Po di Gnooca, it is known that both were created in the same manner. Indeed, the Charlton crater bears about the same resemblance to the East Lothian craters as the Poncey hole bears to the Po di Gnooca crater. There is one very illuminating exception to this: the shape of the Poncey hole was elliptical, while the shape of the Po di Gnooca crater was circular -- both corresponding to the shapes of the UFO's that formed them. It seems reasonable that we can deduce from this that the UFO's which formed the British craters were all circular (probably lenticular) in shape -- although, it must be emphasized, not necessarily of widely disparate sizes.

A completely unique feature was involved in the East Lothian craters: the odd square holes discovered about 35 feet from the craters.

Having discussed the general characteristics of the 1963 crater epidemic, our next step is to look back through UFO history for precedents to the occurrences. Our search is not particularly rewarding. The first thing we come across is a chapter in Frank Edwards' Strangest of All (Ace, 1962, pp. 78-82) entitled "Quoer Craters," in which six cases of craters which were intrinsically unusual and/or formed under unusual circumstances are listed. However, while they all fall under this broad heading, the six incidents are definitely heterogeneous, and do not seem to have all resulted from the same cause. In four of the cases, explosions (variously described as "huge and violent," "tremendous," and "jarring") were reported in connection with the craters. In contrast, all of the British craters were formed silently (unless the blast that Joliffe heard was connected with the crater at Charlton). Of the two others, only one bears a distinct resemblance to the 1963 epidemic, but the other may have a connection. Both will be summarized here:

On July 31, 1953 (by a curious coincidence, just under a decade before the British craters were first discovered), Mrs. John C. Allen discovered on her South Carolina farm a circular crater which was more than sixty feet across and from seven to twelve feet deep. On the next day, she came across a second, smaller, crater, nine feet across and five feet deep. Both gave the appearance of having been blasted out of the ground (or, more likely, sucked out). On July 30, a straight line of four similar craters, fifteen feet across and six feet deep, was found in a field alongside a road about six miles from Georgetown, South Carolina. All resembled the British holes in that soil was scattered around them, they were all circular, and no explosion was heard at any time. Near one of the craters on the Allen farm, the local sheriff "discovered a pine tree near one of the craters with its top sheared off as if by lightning" and found some wood ash on the tree (remember the carbonized poplars at Po di Gnooca).

The second of these cases occurred on a farm near Carthage, South Dakota, in the spring of 1955. One morning, the owners, Mr. and Mrs. Ernest Hall, discovered in one of their fields a hole two feet in diameter and 18 feet deep. Clearly, the Carthage crater was not formed by a mechanism identical to that which created the ones in South Carolina, but it seems distinctly probable that it too had a UFO connection. More about this later.

A relatively recent incident, not without a distinct element of humor, may have a bearing on our discussion. According to the New York Times of April 7, 1962, an enormous oblong crater was discovered on a borough-owned tract of land about two miles northeast of Sayreville, New Jersey. It was 1,570 feet long, 780 feet wide, and forty feet long; it contained an estimated 1,800,000

cubic yards of fill dirt worth anywhere from \$360,000 to \$720,000. As Mayor Harold Boehm of Sayreville began the investigation, it soon became apparent that the only thing anybody knew was that nobody knew anything. "Mayor Boehm said the only certainty was that the borough had never been paid for the dirt. He discovered the loss 'about a week ago' during a routine check of the excavators working in the area." It was quickly calculated that, to haul away the dirt, the equivalent of 360,000 dump trucks of a five-cubic-yard capacity each must have been used. "Prosecutor Dolan [of Middlesex County], who was called into the case by Mayor Boehm, said: 'It's incredible that something like this could go on without somebody knowing about it.' He said heavy earth-moving equipment must have been used in an operation working a long period of time."

Obviously, it is unnecessary to invoke a UFO to explain this mysterious hole; nevertheless, it is as likely an explanation as anything else, and should be kept in mind.

In our Shadow of the Unknown article we, not unnaturally, made the assumption that the formation of the Charlton hole was merely a fortunate accident, a chance by-product of a UFO landing or near-landing. However, when we received the reports of other crater groups having been found all over England and southern Scotland, it became obvious that there was considerably more to it than that. There was clearly a plan behind the formation of the mystery holes -- but what?

The key to the puzzle was discovered by Mr. Haythornthwaite, who, being a reader of the Flying Saucer Review, naturally had a keen eye for orthotonic alignments. "One interesting fact emerges," he wrote me. "A line through Charlton, Wiltshire, and the Westmorland Craters, passes as nearly as I can judge over Middle Monynut Farm in the Lammermuirs. (This is using a conical projection map, but for a country the size of Britain the error is small.)" Counting Southampton (as we must, for the purpose at hand), there were six locations in England and Scotland at which craters were discovered; according to calculations made by Alexander D. Mebane (Civilian Saucer Intelligence, New York City)⁹, we should expect to find one three-point alignment in one out of every four random sprinklings of six points. Now, granted these odds are far from overwhelming, Haythornthwaite's discovery was nevertheless most interesting, and we rather laboriously plotted the locations of the craters for ourselves (see Figure 4) to see if we could find anything else of significance.

The first thing that struck us was the geographical position of the Charlton-Dufton-Fell-East Lothian alignment. It runs almost exactly north-south, differing from the position of the second meridian west by less than 5°. It bisects the southern coast of England almost exactly and is roughly perpendicular to it. If it is extended slightly on the north, the point at which it passes out over the sea quite closely coincides with the intersection of lines drawn along the prominent points of the eastern and western coasts. However one looked at it, the alignment seemed to be far more than pure coincidence.

This was all very well, but it was far from sufficient. There were still the craters at Sanquhar and Flamborough Head to be accounted for. We decided to postulate a larger pattern that would fit them in -- a pattern including eastern Scotland as well as England. We extended the Charlton-East Lothian alignment to a hypothetical point about thirty miles northeast of the northeastern tip of Scotland, among the Orkney Islands, then constructed lines from this point passing through Sanquhar and Flamborough Head. It quickly became obvious that not only did those lines follow to a great extent the eastern

⁹ Appendix to Michel's Flying Saucers and the Straight-Line Mystery, p. 259.

and western coasts of England (in addition, the eastern line passes exactly over the eastermost point of the Scottish coast), but the angle that they formed was bisected almost precisely by the extended Charlton-East Lothian alignment (on our map, $\angle BAF = 14^\circ$ and $\angle EAF = 15^\circ$). It is true that our placement of the hypothetical point was rather arbitrary; nevertheless, a point in the Orkneys or within fifty miles or so south of them would seem to be the most logical point of origination for an extraterrestrial survey such as is indicated here, and, as long as we stick to that general area, the angles outlined above will not vary significantly.

We were admiring the neatness of the pattern which we had constructed when another thought occurred to us. Measuring the distance from the Middle Monynut Farm to Dufton Fell, we discovered to our surprise that it was equal to exactly one fourth of the total distance from Middle Monynut Farm to Charlton. The chance of this being coincidence was small, and it seemed reasonable to deduce from it that the distance from the East Lothian craters to those at Dufton Fell (approximately 134 miles) was either a basic unit of some sort or a multiple of one.¹⁰

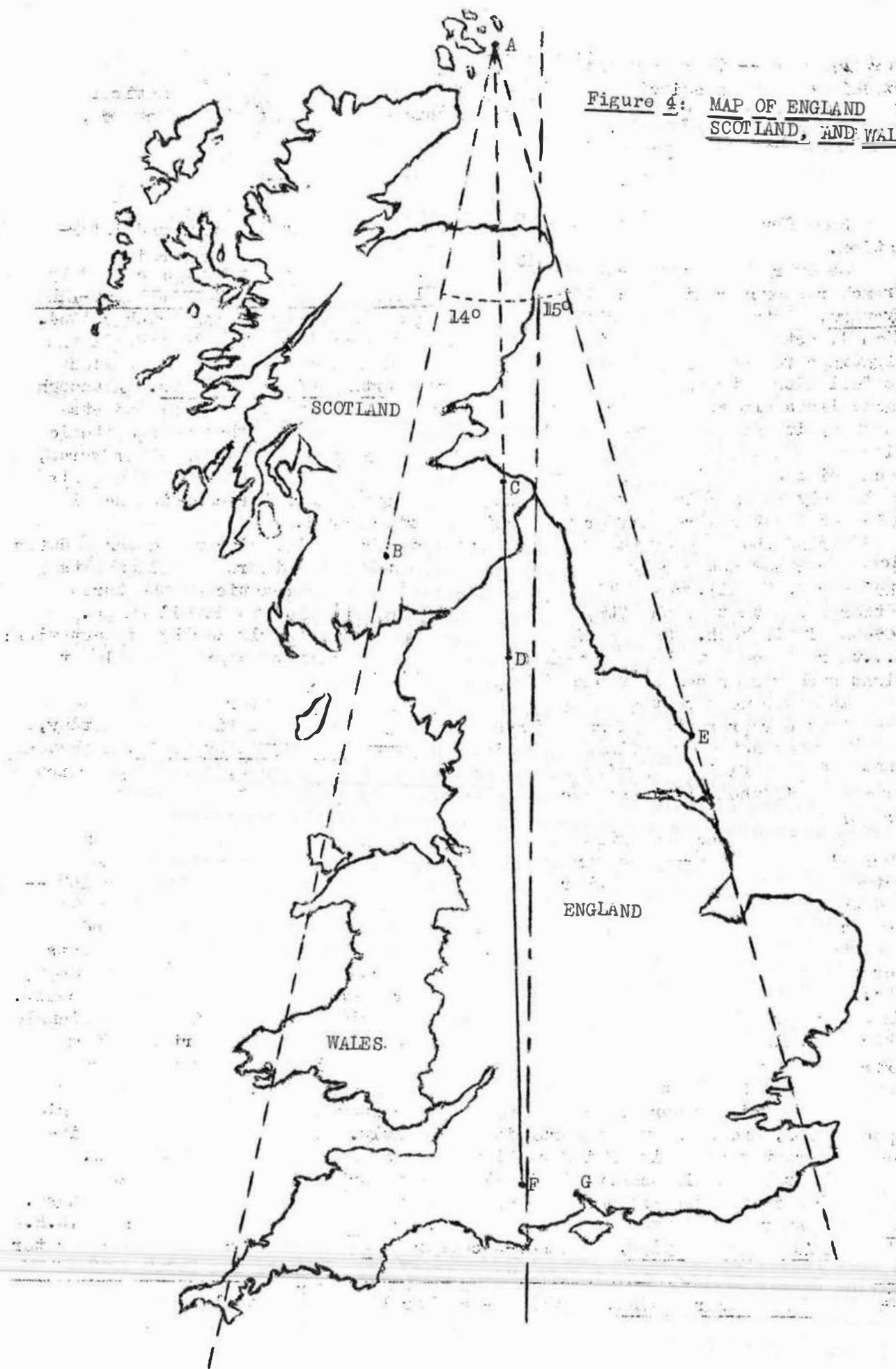
Using this as a basis for further observations, we marked off points two and three units north along our extended alignment from East Lothian, in an attempt to locate an adjusted point of origination, so to speak. However, we quickly discovered that the distance from either of these points to Sanquhar and Flamborough Head could not be measured in even units. To remedy the difficulty, we made the tentative deduction that the true "basic units" were actually halves of our units, or 67 miles. Making this assumption for the moment, we proceeded to measure off five half-units north from East Lothian; we noted approvingly that this new point (A, on our map) fell only about ten miles north of the old hypothetical point of origination. Measuring from point A to Sanquhar -- yes, three units, on the nose. From point A to Flamborough Head was four units, plus about ten miles. (This discrepancy is annoying but not inexplicable. The line passes almost entirely over water until it reaches Spurn Head, more than fifty miles past Flamborough Head; all along this distance, Flamborough Head is just about the only point of land along the line. If indeed the pattern is part of an aerial reconnaissance by UFO's, it seems likely that their pilots would be willing to stretch a point and make a landing at Flamborough Head. It is interesting, although perhaps not significant, that Spurn Head itself is exactly nine half-units from point A.)

The above paragraph is of course highly speculative, and the validity of its logic cannot be proved, but it is nevertheless a reasonable extrapolation from the facts which can be proved. The existence of the Charlton-East Lothian alignment, its geographic position, the 3:1 ratio of the distances from Charlton to Dufton Fell and from Dufton Fell to the Middle Monynut Farm, the angles formed when we extend this alignment to a logical point of origination in the northernmost part of the Island and then connect this point with Sanquhar and Flam-

¹⁰To avoid obscurity in subsequent references, we are defining "unit," as used in this article, to mean the distance of approximately 134 miles.

The diagram opposite shows the pattern of lines involving craters in England and Scotland, including Southampton. A number of the small islands off the Scottish coast have been omitted, as they involve difficulty and do not add to the value of the map. The original hypothetical point is not shown, to avoid confusion. Legend: A = adjusted hypothetical point of origination; B = Sanquhar; C = Middle Monynut Farm; D = Dufton Fell; E = Flamborough Head; F = Charlton; G = Southampton; — = alignment; - - - = hypothetical line; - - - = second meridian west.

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Figure 4: MAP OF ENGLAND
SCOTLAND, AND WALES



borough Head -- these are not illusory. Nor, in our opinion, can they be explained away as coincidence. We do not possess sufficient mathematical knowledge to evaluate the probability of this pattern appearing by chance, but it is clearly very small.

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Some more extrapolation coming up, but first a little background information.

As every UFO buff worth his salt knows, the term orthoteny was coined by French researcher Aime Michel in his book Flying Saucers and the Straight-Line Mystery, a study of the sighting flap in France in September and October 1954. Michel, acting on a suggestion made by the late Jean Cocteau, plotted all the sightings for each day of the flap on maps, and discovered that they tended to fall along straight lines, which he termed orthotenic alignments. Although these lines almost always corresponded with the trajectories of the objects on them, it was clear from the chronology of the sightings that an orthotenic line was not identical with the trajectory of any one object. In other words, each point on the line represented a separate object, and thus the alignments could only be explained by postulating a pattern of aerial reconnaissance in which at least several different machines participated.

During the peak of the flap in early October, Michel discovered three dates which produced not merely alignments but unmistakable networks of alignments (October 2, 7, 11), resembling spider webs. The most dramatic of the three networks was that of the 7th, which Michel discusses in some detail on pp. 146-50 of his book. One of his observations is particularly worthy of quotation: "...there appears to be a prevalence of angles of about 30 degrees; at least eight such angles can be found at major apexes."

It takes no more than a glance at our 1963 crater pattern to realize that it too represents a form of orthoteny -- but a special kind of orthoteny, an orthoteny not of sightings of UFO's but of craters formed by UFO's. Although there was a definite sighting flap over England in July 1963,¹¹ the appearance of the UFO's themselves was secondary to the formation of the mysterious craters.

We note at once an extremely significant point of resemblance between Michel's 1954 patterns and our crater pattern: the prevalent angle in the October 7 network was 30°, whereas the prevalent angle in our network is 15° -- and there is no need to point out that 30° is exactly twice 15°. We seem to have come across a highly significant fact; let us apply it to our map and see what happens. Taking the line AB, we rotate it another 15° west; it cuts across Scotland and Ireland, but nothing spectacular is apparent. Now another 15°...and our line follows closely the northern part of the western Irish coast. In other words, we have in this line and AE two sides of an equiangular triangle which contains almost all of the British Isles, with A as its vertex. If an extraterrestrial survey of Great Britain were planned, what better pattern could be used for it than the one which we have mapped out?

All of this is pure speculation, but it cannot be denied that it is logical speculation, and we must not shrug it off lightly. Its importance may be increased greatly by a bit if information which we have been saving for now.

Although data is scanty, it is clear that further craters have been discovered in the Netherlands. Details are available on at least one of these. In his most recent letter to us (10/11/63), Mr. Haythornthwaite wrote: "F.S.R. [the Flying Saucer Review, November-December 1963] also reports the Dutch crater

¹¹See Flying Saucer Review, September-October 1963, for details.

as being on the Friesian island of Schiermonnikoog. It was square, 12' deep and more than 6' across." Too much weight should not be assigned to this -- the map we are using here is rather crude and not in the gnomonic projection which is required for exact measurements on the earth's surface -- but as near as we can judge, a line drawn from point A to Schiermonnikoog makes a 30° angle with line AE. If our measurement is accurate, we must extend our pattern once again -- this time to include the Netherlands.

On the basis of this, it is perhaps not too farfetched to say that the British crater pattern may be merely a section of a much larger pattern, and that more craters may begin to turn up along all lines forming angles of multiples of 15° with line ADF at point A. This could well include much of Western Europe.

However, before we go too far out on a limb, it would be best to attempt to find confirmation of our more basic deductions. If our conclusions regarding the units are correct, we may expect to find other craters at unit divisions along line ADF. Moving north from Charlton, we encounter first Worcester, then a point about two miles west of Stockport, then Dufton Fell and Middle Morynut Farm, and finally, a point two miles west of Banchory, Scotland.

These are the points at which we should make our first attempts to locate other craters. But we should not stop there. We should also examine the half-unit divisions along this line. Between Charlton and Worcester we find a point about two miles west of Malmesbury; between Worcester and Stockport is a point three miles northwest of Stafford; between Stockport and Dufton Fell is Settle; and between Dufton Fell and Middle Morynut Farm is a point five miles northwest of Bellingham. All other half-unit divisions along this line fall over water.

To list the half-unit divisions along line AE, beginning at point A: All of these fall over water until we reach Spurn Head, over fifty miles south of Flamborough Head. The next half-unit point after that falls over water; the next is about seven miles east of Ely; the next is on the coast, five miles north of Southminster; and the last is almost exactly between Ashford and Dover.

The half-unit divisions along line AB, beginning at point A: The first two fall over water; the next is about four miles north of Balmoral, Scotland; the next is about six miles north of Perth; the next is about eight miles west of Edinburgh; then comes Sanquhar; the next three fall over water; the next lies about a mile north of Pwllheli, Wales; the next falls over water; the next is about two miles northeast of Pembroke, Wales; the next falls over water; and the last lies two miles south of Padstow, England.

It might eventually prove worthwhile for British UFO investigators to check the above locations for possible craters.

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What does it all mean? What is the purpose of the formation of these strange craters?

In our opinion, the most logical answer to this question is that they represent an entirely new phase of the UFO reconnaissance of our planet: an organized and systematic study of the soil of Great Britain and possibly other places in Western Europe.

Of course, attempts by UFO's and UFO beings to collect soil samples are hardly novel. In many of the "little man" cases, the creatures were observed taking specimens of earth, from Brush Creek, California (summer 1953) to Valencia, Venezuela (December 19, 1954). One of the most recent (and alarming) cases of this nature occurred on August 17, 1962, near Diamantina, Brazil; it was observed by the ill-fated Rivalino da Silva, who was kidnapped by a UFO three days later.¹²

¹²Fate, June 1963, pp. 26-33.

Similarly, there has been strong evidence in the past that a number of cases have occurred in which soil was removed by UFO's by purely mechanical means. We refer here particularly to the famous Olden Moore incident of November 6, 1957. After a UFO was observed to land and take off again in a field near Montville, Ohio, the ground was found to be radioactive. In addition, according to the Cleveland Press (Nov. 8), Locke [Kenneth Locke, Lake County Civilian Defense Director] also found...two holes three feet deep. "They were not like post holes, an observer said: they were perfect." One assumes from this that the holes were about six inches in diameter, like post holes, but had smooth walls, as if earth samples had been removed with a cylindrical core borer.¹³ The description of these holes bears a startling resemblance to that of the hole found near Carthage, South Dakota, in 1955 (see above). The only difference is, of course, in the dimensions of the holes, but, obviously, this point is hardly of great significance.

The exact mechanism by which the Carthage and Montville holes were formed is not clear. However, we know of another category of UFO-created holes which differ greatly from these. Into this category fall the British craters which have been the subject of this article, the craters at Poncey-sur-l'Ignot and Po di Gnocca, and probably the craters discovered in South Carolina in 1953 (possibly also the Sayreville hole, although to carry away 1,800,000 cubic yards of soil would be a big job even for a UFO). The craters in this category were almost definitely formed by the suction created by UFO force fields.

Although, as pointed out above, soil samples have often been taken by UFO's in the past, before 1963 this was extremely sporadic and haphazard, almost as if it were a minor sidelight to which attention was given only when time could be spared from more important projects. It was not until the crater epidemic that any pattern was discernible.

The meaning of this becomes more readily apparent when we consider the pattern of UFO activity deduced by Mrs. Coral E. Lorenzen in her excellent book The Great Flying Saucer Hoax (William-Frederick, 1962). Mrs. Lorenzen points out that in the early years of UFO activity (1947 to mid-1952) there was no apparent pattern; it seemed that the UFO's were concerned only with general observation of Earth. With the Big Flap in 1952, however, the whole picture was changed; the UFO's evinced particular interest in terrestrial defenses. The orthotenic discoveries by Michel in regard to the French flap of 1954 indicated that a similar survey was being made in Europe. It was during the period of 1953-55 that most of the early collection of earth samples, rocks, etc. by the "little men" took place. The pattern again shifted abruptly in the fall of 1957, when the sudden eruption of electro-magnetic cases in the United States added what the late Captain E.J. Ruppelt called "a whole new dimension to the UFO investigation."¹⁴ The American cases seemed innocuous enough -- mainly involving stalled automobiles and similar incidents -- but there were a number of foreign reports which were, to say the least, rather sinister. These latter cases were capably analyzed by Dr. Olavo T. Fontes, Rio de Janeiro physician and crack UFO researcher, whose thesis it was that UFO's are hostile. His highly controversial interpretation of them was that they were weapon tests by the UFO's, possibly in preparation for an approaching D-day. In 1960, Dr. Fontes documented an orthotenic survey which had taken place in northeastern Brazil on May 13 of that year, which he considered a study for the purpose of gathering data for future UFO mass landings, the beginning of an invasion of Earth. More than a year later, UFO landings and "little men" reports, which had been more or less dormant, began to pick

¹³ Appendix to Flying Saucers and the Straight-Line Mystery, p. 253.

¹⁴ Maney and Hall, The Challenge of Unidentified Flying Objects (Washington, 1961), p. 70. Appendix E of this excellent volume contains the complete NICAP Subcommittee report on electro-magnetic effects, prepared in June 1960.

up, and increased through 1962. They reached their peak late that year, mainly in South America but also to some extent in the United States (as witness the Oradell, New Jersey, sightings of September). These fell off in early 1963, and, from then until the summer, what sightings there were were rather humdrum.

Then came the British crater epidemic -- the latest major UFO pattern change to date. For the first time, the primary concern of the UFO's was with soil samples. What had previously been a mere routine interest suddenly became a project of the highest priority. A whole new phase had begun.

This phase may be interpreted as being ominous. "The little men," wrote Mrs. Lorenzen (p. 49), referring to the collection of earth samples in 1954, "were interested in earth crops and soil probably in their usefulness to their plans. I envision a huge laboratory somewhere in space in which experiments involving the adaptability of other types of plant life to earth soil are being carried out. What are their plans? They may intend to establish a base on earth, and if the visitors intend to bring along their own agriculture they plan to stay a long while."

If we evaluate the British craters in the light of Mrs. Lorenzen's hypothesis, the results are clearly more than a little frightening. But we must beware of letting our natural fear of the unknown run away with us. Cogent as these hypothetical reconstructions of the UFO beings' purpose may be, we should remember that they are mere hypotheses, and that the facts are subject to other and more optimistic interpretations. (Indeed, it is noteworthy that most of the case for UFO hostility rests upon pure hypothesis.) On the other hand, we must not permit these considerations to lull us into a false sense of security, leaving us vulnerable to a possible invasion from space.

However they are interpreted, the crater reports bring home once again the importance of the UFO situation, and the need for thorough, meticulous, scientific study of it. We must not procrastinate -- we must get to work on it -- NOW.

FAMED AUTHOR, NATURALIST JOINS NJAAP PANEL

In order that NJAAP may have the opinions of highly qualified persons in studying and evaluating UFO data, we are forming a Panel of Special Advisors to help us. Although we wish to include one or two top-notch UFO investigators, we hope for the Panel to mainly consist of persons whose specialties lie in such fields as physics, meteorology, electronics, and other scientific areas. Membership on our Panel, therefore, does not necessarily imply endorsement of our opinions on the UFO situation, even to the extent of belief or disbelief in the reality of UFO's. We will individually give the opinions of each Advisor.

We are honored to have on our Panel the famed author and naturalist Ivan T. Sanderson. Mr. Sanderson is a graduate of Eton, Cambridge, and the University of London, holding a B.A. degree in Zoology, Geology, and Botany. He is a Fellow of the Linnean Society of London, the Royal Geographical Society of London, and the Zoological Society of London. He has traveled all over the world, made frequent regular appearances on radio and television, and has authored sixteen books on zoology and related fields. Mr. Sanderson is presently the Science Editor for Chilton Books, Philadelphia.

Mr. Sanderson's opinion on UFO's is that, while many UFO's are extra-terrestrial vehicles, "UFO" covers a largely heterogeneous group of objects and phenomena, as diverse as the life forms found in the North Atlantic.

NJAAP is indeed fortunate to have the aid of Mr. Sanderson.

